



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/553,332	08/01/2006	Graeme Mein	5458ST-1	1070
22442	7590	06/03/2009		
SHERIDAN ROSS PC			EXAMINER	
1560 BROADWAY			HAYES, KRISTEN C	
SUITE 1200				
DENVER, CO 80202			ART UNIT	PAPER NUMBER
			3643	
			MAIL DATE	DELIVERY MODE
			06/03/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/553,332	<b>Applicant(s)</b> MEIN, GRAEME
	<b>Examiner</b> KRISTEN C. HAYES	<b>Art Unit</b> 3643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 19 March 2009.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1,3-6 and 8-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1, 3-6, 8-20 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/166/08)  
 Paper No(s)/Mail Date 20090319
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_
- 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1, 3-6, and 8-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 1 recites the limitation of "wherein the sensor apparatus is configured to identify the detected property of the extracted milk with the extraction element or elements from which the milk was extracted." The current wording of the claim is confusing. It seems to say the extraction elements, along with the sensor is used to identify the properties of the milk or that the sensor identifies the milk taken from the extraction element. During an interview with the attorney, it was agreed that the wording of the limitation was confusing. It was agreed that perhaps "with the extraction element" should be changed to "with and the extraction element". However, it is noted that the limitation of the sensor identifying the extraction element from which the milk is extracted is not found in the original disclosure.

4. The wording of claim 19 makes it seem as if sensor output signals are compared to extraction elements. However, during the telephone interview with the attorney, it was indicated that the sensor output signals that indicated the property of milk from one extraction element were compared to sensor output signals that indicated the property of milk from another extraction element. This is not clearly described by the claim.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.  
(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 3-6, 9-12, 15 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Nordegren et al. 4,011,838.

7. Regarding claim 1, Nordegren discloses a sensor apparatus used with milk extraction machinery including a plurality of extraction elements (4-7, 16, 36-39), a collection line (12), the sensor apparatus including: a sensor (14) forming a serial extension of the collection line adapted to detect the presence of a particular compound within the milk extracted (Nordegren, column 5: lines 38-39), a controller (16, 36-39), whereby activation of the extraction elements is controlled to prevent the at least one sensor being exposed to extracted milk supplied from all the extraction elements at one time (Nordegren, abstract: lines 14-17), wherein the sensor apparatus is configured to identify the detected property of the extracted milk with the extraction element or elements from which the milk was extracted (as best understood) (Nordegren, column 5: lines 38-39).

8. Regarding claim 3, Nordegren further discloses the extracted milk supplied by an extraction element is foremilk (in that the first milk drawn from the udder would be foremilk).

Art Unit: 3643

9. Regarding claim 4, Nordegren further discloses the extraction element being formed from a single teatcup (4-7 can be used independently) which includes a pulsator valve (36-39 can be used independently) associated with a pulsation system.

10. Regarding claim 5, Nordegren further discloses the extraction element being formed from a four teatcups (1-4) associated with four independent pulsator lines (40-43) pulsation system.

11. Regarding claim 6, Nordegren further discloses a single collection line (12) collects all milk delivered from a single animal.

12. Regarding claim 9, Nordegren further discloses a controller formed by a pulsator (36-39) controller of a dairy animal milking machine.

13. Regarding claim 10, Nordegren further discloses the pulsator controller sequentially activating the pulsator valves of each teatcup (Nordegren, abstract: lines 14-17).

14. Regarding claim 11, Nordegren further discloses a single extraction element being pulsated at one time (Nordegren, abstract: lines 14-17).

15. Regarding claim 12, Nordegren further discloses a pair of extraction element being pulsated at one time (Nordegren, abstract: lines 14-17) (If the extraction elements are capable of being operated one at a time, they are capable of being operated two at a time)

16. Regarding claim 15, Nordegren further discloses the pulsator valves of non-activated extraction elements being partially activated during extraction of milk from an activated extraction element (Nordegren, column 5: lines 4-7).

17. Regarding claim 16, Nordegren further discloses the partial activation of an extraction element not causing milk to be extracted and delivered to the collection line (Nordegren, column 7, lines 36-38). (The first stimulation phase has a timeout value. When milk is not sensed by the

sensor that means no milk has been produced which triggers the start of a second milking phase).

18. Claims 1, 8 and 17-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Van den Berg et al US 6,823,817.

19. Regarding claim 1, Van den Berg discloses a sensor apparatus used with milk extraction machinery including a plurality of extraction elements (2), a collection line (Van den Berg, Figures 1, 2), the sensor apparatus including: a sensor (10, 11, 12) forming a serial extension of the collection line adapted to detect the presence of a particular compound within the milk extracted (Van den Berg, column 5: line 25, lines 39-40), a controller (13) configured to control the activation of the extraction elements during a pre-determined period of milking the animal (in that if the controller is capable of deactivating the extraction elements, it is capable of activating them, Van den Berg, column 8: lines 21-22), wherein the sensor apparatus is configured to identify the detected property of the extracted milk with the extraction element or elements from which the milk was extracted (as best understood) (Van den Berg, column 7: line 63-column 8: line 6).

20. Regarding claim 8, Van den Berg further discloses the sensor measuring electrical conductivity (Van den Berg, column 5: line 45).

21. Regarding claim 17, Van den Berg further discloses an indicator adapted to receive an output signal from the sensor and issuing an alarm signal indicating abnormal milk has been delivered from an extraction element (Van den Berg, column 8: lines 50-55).

22. Regarding claim 18, Van den Berg further discloses a diversion system (15) associated with the indicator to isolate abnormal milk.

23. Regarding claim 19, Van den Berg further discloses the milk abnormality being detected through a comparison between sensor output signals indicating the detected property of the milk

extracted by an extraction element and an alternative extraction element (Van den Berg, column 7: line 63-column 8: line 6).

24. Regarding claim 20, Van den Berg further discloses a rolling average of sensor readings being used to detect abnormalities in extracted milk (Van den Berg, column 7: lines 1-10).

***Claim Rejections - 35 USC § 103***

25. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

26. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nordegren in view of Rubino US 4,572,104.

27. Regarding claim 13, Nordegren discloses a controller (16, 86) and a drainage delay period (Nordegren, column 8: lines 22-25) but does not disclose the period being between activation of different extraction elements. Rubino teaches a drainage delay period between activation of different extraction elements (Rubino, abstract: lines 1-4). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Nordegren so that milk received from one extraction element did not contaminate milk received from another extraction element.

28. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nordegren in view of Seaborne US 6,170,434.

29. Regarding claim 14, Nordegren further discloses a controller (16, 86). Nordegren does not disclose the extraction element initially activated by a controller being selected randomly.

However, this technique is known in the art, as disclosed by Seaborne (Seaborne, column 1: lines 32-35). It would have been obvious to one of ordinary skill in the art to select the first extraction element of Nordegren randomly so that the same extraction element would not continually be activated, which could cause incorrect readings (i.e. an error in one specific extraction element).

***Response to Arguments***

30. Applicant's arguments with respect to the rejection of claims 1, 2, 4-7 and 9 under Swanson have been fully considered and are persuasive. The rejection of the claims has been withdrawn.
31. Applicant's arguments filed with respect to the rejection of the claims under Nordegren have been fully considered but they are not persuasive.
32. The wording of the new limitation of claim 1 (discussed above in the 112 rejection) seems to indicate the milk extracted with the extraction element is identified by the sensor, which Nordegren discloses. Furthermore, this is seen as a functional limitation. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.
33. Nordegren is also seen as controlling the extraction elements during a pre-determined period of milking the animal so that the sensor is exposed to milk from only one element at a time. This is seen as a functional limitation. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in

order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

34. In response to applicant's argument based upon the age of the references, contentions that the reference patents are old are not impressive absent a showing that the art tried and failed to solve the same problem notwithstanding its presumed knowledge of the references.

See *In re Wright*, 569 F.2d 1124, 193 USPQ 332 (CCPA 1977).

35. During the telephone interview, the attorney argued that Rubino teaches a time delay in reference to a valve closing; whereas the controller of the instant invention controls the time delay and also that the reference and the application defined the time period differently. Rubino is still seen as disclosing a time delay controlled by a controller (44) (Rubino, abstract) which activates extraction elements (14).

36. During the telephone interview, the attorney argued that Seaborne teaches automatic pulsators being randomized, not the extraction elements. However, the automatic pulsators work with the controller (and are seen as apart of the controller) to operate the extraction elements. Seaborne is seen as meeting the limitation of the claim.

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KRISTEN C. HAYES whose telephone number is (571)270-3093. The examiner can normally be reached on Monday-Thursday, 7:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Poon can be reached on (571)272-6891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3643

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KCH  
27 May 2009

Peter Poon  
Examiner  
Art Unit 3643

/Peter M. Poon/  
Supervisory Patent Examiner, Art Unit 3643